



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,368	04/12/2004	Steven A. Bogen	1159.1004-006	4846

21005 7590 07/24/2009
HAMILTON, BROOK, SMITH & REYNOLDS, P.C.
530 VIRGINIA ROAD
P.O. BOX 9133
CONCORD, MA 01742-9133

EXAMINER

ALEXANDER, LYLE

ART UNIT	PAPER NUMBER
----------	--------------

1797

MAIL DATE	DELIVERY MODE
-----------	---------------

07/24/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte STEVEN A. BOGEN and HERBERT H. LOEFFLER

Appeal 2009-005697
Application 10/823,368
Technology Center 1700

Decided:¹ July 24, 2009

Before EDWARD C. KIMLIN, CHARLES F. WARREN, and
TERRY J. OWENS, *Administrative Patent Judges*.

KIMLIN, *Administrative Patent Judge*.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1, 3, 5-8, 10 and
12-18. We have jurisdiction under 35 U.S.C. § 6(b).

¹ The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the Decided Date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

Claims 1 and 8 are illustrative:

1. A dispensing assembly, comprising:
 - a. a platform supporting a plurality of microscope slides, the platform having plural heated surface areas, each heated by an electric heater thereunder, each heated surface area being adapted to be in contact with and underlie a microscope slide bearing a biological sample;
 - b. plural temperature sensors on the platform for sensing temperature of respective heated surface areas;
 - c. a liquid dispenser that dispenses liquid reagents onto the slide bearing the biological sample, said liquid dispenser being located above said platform, said liquid dispenser and platform being adapted for relative movement between said liquid dispenser and platform; and
 - d. a microprocessor adapted to be programmed with information on the location of the liquid reagents, the location of the slides, and a protocol to control heating of the slides and application of reagents to the slides.
8. A method for processing biological samples mounted on microscope slides, comprising:
 - a. programming a microprocessor with information on location of liquid reagents, location of slides and a protocol for applying reagents to slides and heating slides;
 - b. placing a microscope slide having a biological sample on a surface area of a platform, the surface area being heated by an electric heater thereunder and the platform being adapted to support a plurality of slides, the platform further comprising plural temperature sensors for sensing temperature of respective surface areas;

- c. under microprocessor control, causing relative movement between a liquid dispenser and the platform so as to align the liquid dispenser over a microscope slide;
- d. under microprocessor control, dispensing liquid reagent from the liquid dispenser onto the slide; and
- e. under microprocessor control, causing heating of the biological samples.

The Examiner relies upon the following references as evidence of obviousness (Ans. 3):

Kerr	5,075,079	Dec. 24, 1991
Heidt	5,089,229	Feb. 18, 1992
Potter	5,819,842	Oct. 13, 1998

Appellants' claimed invention is directed to a dispensing assembly and a method of using the assembly for processing biological samples mounted on microscope slides. A platform which supports the slides has plural heated surface areas and plural temperature sensors for sensing the temperature of the heated surface areas. A microprocessor is used to control the heating of the slides.

Appealed claims 1, 3, 5-8, 10, and 12-18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Heidt or Kerr in view of Potter.

Appellants do not present separate arguments for claims 3, 5-7, 10 and 12-18. Accordingly, these claims stand or fall together with the independent claims upon which they depend.

We have thoroughly reviewed each of Appellants' arguments for patentability, as well as the Declaration evidence relied upon in support thereof. However, we are in complete agreement with the Examiner that the

claimed subject matter would have been obvious to one of ordinary skill in the art within the meaning of § 103 in view of the applied prior art.

Accordingly, we will sustain the Examiner's rejection for essentially those reasons expressed in the Answer.

There is no dispute that Heidt and Kerr disclose a dispensing assembly and a method of using the assembly to process biological samples on a slide wherein a microprocessor is programmed to control the heating of the slides and the application of reagents to the slides. As acknowledged by the Examiner, Heidt and Kerr do not disclose plural temperature sensors on the platform for sensing the temperature of the plurality of heated surface areas. However, as pointed out by the Examiner, Potter evidences that it was known in the art to separately control the heating of different supports for biological material to be analyzed. Accordingly, based on the collective teachings of the applied references, we find no error in the Examiner's legal conclusion that it would have been obvious for one of ordinary skill in the art to modify the assemblies of Heidt and Kerr to "individually control the heating of each slide by a heating element and temperature sensor to gain the advantages of being able to heat individual slides for specific assays" (Ans. 5, second para.). Also, we find that it would have been obvious to use separate temperature sensors for each of the slides of Heidt and Kerr to maintain the temperature of the slides at the desired temperature, whether that temperature be the same for each slide or different. We further note that the claimed "plural heated surface areas" does not require separate heaters, but embrace separate areas being heated by the same heater, as well as a completely heated surface area.

We are not persuaded by Appellants' argument that Potter is directed to liquid samples contained in wells rather than samples on slides. Whether the supports for the samples to be tested by Potter's assembly may be characterized as slides is of no moment. In our view, one of ordinary skill in the art would have readily recognized that Potter's teaching of separately controlling the heating of different samples can be applied to samples contained on any support, be it a slide or a well.

Appellants also maintain that

[i]n both Heidt and Kerr, instead of a reagent dropping onto a microscope slide bearing a biological sample, a drop of serum is dispensed onto various chemical analyte "slides," each of which is impregnated with a reagent that causes a color to develop upon reacting with substances in the serum.

(App. Br. 10, second para.). We agree with the Examiner that this argument is not relevant to the apparatus claims defining a dispensing assembly comprising a structure that is capable of dispensing serum or liquid reagents onto a slide bearing liquid reagents or biological samples. The recited liquid reagents and biological sample are not part of the structure of the dispensing assembly of claim 1. As for method claim 8, we are persuaded that it would have been obvious for one of ordinary skill in the art to use the dispensing assemblies of Heidt and Kerr to dispense either reagents or biological samples on slides containing the other reactive chemicals.

Appellants also submit that "the primary references rely on convective heating to heat the slides rather than conductive heating enabled by the claimed plural underlying heated surface areas" (App. Br. 12, second para.). However, we agree with the Examiner that Figures 9 and 10 of Kerr depict heating element 188 that heats slide 28 by conductive heating. Moreover,

we are of the opinion that it would have obvious for one of ordinary skill in the art to employ either of the well-known techniques of convective and conductive heating to heat the slides of Heidt and Kerr.

Appellants further submit that the chemical analyte slides described in Heidt and Kerr do not require heating control since “the temperature at which each slide is incubated must be the same” (App. Br. 14, penultimate para.). However, as set forth above, it would have been obvious for one of ordinary skill in the art to use separate sensors to maintain each slide at the same temperature.

Appellants rely upon the Zeheb Declaration for the proposition that one of ordinary skill in the art would not have considered the present invention as useful for the staining techniques known at the time of filing; nor would have one of skill in the art have considered the teachings of any of the references cited by the Examiner alone, or in combination, as likely to succeed in the automated processing of these techniques, in particular, special staining techniques.

(App. Br. 9, third para.). In particular, the Declarant states that at the time of filing the present application, “one of ordinary skill would not have predicted the utility of plural heated surface areas, each heated by an electric heater thereunder and having a respective temperature sensor, in a random access dispensing assembly or in a method for processing biological samples mounted on microscope slides” (Decl., para. 6). However, we agree with the Examiner that the Declaration is not probative of non-obviousness since the Declarant does not address the obviousness of employing the technique of separately heating different samples disclosed by Potter. The fact that all the staining techniques known to Doctor Zeheb at the time of filing the present application may not have used separate heaters for different slides speaks to

the novelty of the claimed invention but not to its nonobviousness under 35 U.S.C. § 103.²

In conclusion, based on the foregoing, the Examiner's decision rejecting the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a) (2008).

AFFIRMED

ssl

HAMILTON, BROOK, SMITH & REYNOLDS, P.C.
530 VIRGINIA ROAD
P.O. BOX 9133
CONCORD, MA 01742-9133

² Although the Examiner commented on the merits of the Declaration, the Examiner also stated that the "Declaration has not been submitted in a timely manner and has not been considered" (Ans. 5, last sentence). However, as pointed out by Appellants, the Declaration was submitted in a timely manner before the Examiner's Final Rejection, and the Examiner considered the Declaration in the Final Rejection.